TECHNICAL EVALUATION
&
PRELIMINARY DETERMINATION

APPLICANT

Lakeland Animal Nutrition, Inc.
2801 S. Combee Road
Lakeland, FL 33802

Eaton Park Facility

Facility ID No. 1050365

PROJECT

Project No. 1050365-006-AC
Application for Minor Air Construction Permit
Project Name: EU No. 004 – Cyclone Replacement

COUNTY

Polk, Florida

PERMITTING AUTHORITY

Florida Department of Environmental Protection
Air Resource Management
Southwest District Office
Temple Terrace, Florida 33637-7600

July 9, 2012

Prepared by Jim McDonald

GENERAL PROJECT INFORMATION

Air Pollution Regulations

Projects at stationary sources with the potential to emit air pollution are subject to the applicable environmental laws specified in Section 403 of the Florida Statutes (F.S.). The statutes authorize the Department of Environmental Protection (Department) to establish regulations regarding air quality as part of the Florida Administrative Code (F.A.C.), which includes the following applicable chapters: 62-4 (Permits); 62-204 (Air Pollution Control – General Provisions); 62-210 (Stationary Sources – General Requirements); 62-212 (Stationary Sources – Preconstruction Review); 62-213 (Operation Permits for Major Sources of Air Pollution); 62-296 (Stationary Sources - Emission Standards); and 62-297 (Stationary Sources – Emissions Monitoring). Specifically, air construction permits are required pursuant to Rules 62-4, 62-210 and 62-212, F.A.C.

In addition, the U. S. Environmental Protection Agency (EPA) establishes air quality regulations in Title 40 of the Code of Federal Regulations (CFR). Part 60 specifies New Source Performance Standards (NSPS) for numerous industrial categories. Part 61 specifies National Emission Standards for Hazardous Air Pollutants (NESHAP) based on specific pollutants. Part 63 specifies NESHAP based on the Maximum Achievable Control Technology (MACT) for numerous industrial categories. The Department adopts these federal regulations on a quarterly basis in Rule 62-204.800, F.A.C.

Glossary of Common Terms

Because of the technical nature of the project, the permit contains numerous acronyms and abbreviations, which are defined in Appendix A of this permit.

I. Project Description:

A. Applicant:

Mr. William L. Jackson III, President
Lakeland Animal Nutrition, Inc.
2801 S. Combee Road
Lakeland, FL 33802

B. Professional Engineer:

Mr. Lynn Robinson, P.E.
Southern Environmental Sciences, Inc.
1204 North Wheeler Street
Plant City, FL 33563

C. Project Location:

In Polk County at 2801 S. Combee Road, Lakeland, Florida

D. Project Summary:

For the construction modification of an animal feed processing plant. Specifically, the project is to replace Emission Unit No. 004 – Small Pellet Mill's cyclone used to control

particulate matter emissions with a like-kind custom fabricated cyclone and additional details are described in the permit.

E. Application Information:

Application Received on: June 26, 2012 (application was complete as submitted)
Additional Information Requested on: N/A
Additional Information Received on: July 9, 2012 (applicant submitted an email with the new cyclone's airflow rate)

II. Rule Applicability

This project is subject to the preconstruction review requirements of Chapter 403, Florida Statutes and Chapters 62-204 through 62-297, Florida Administrative Code (F.A.C.), as indicated below.

Subject to:	Y/N	Comments
Rule 62-210.300, F.A.C. – Permits Required	Y	Subject to general permitting requirements
Rule 62-212.400, F.A.C. - Prevention of Significant Deterioration	N	Facility is not a PSD major source
Rule 62-296.320(4), F.A.C. - General Particulate Emission Limiting Standards	Y	Facility is a source of unconfined particulate matter emissions and is subject to the process weight table
Rules 62-296.320(1) and (2), F.A.C. - General Pollutant Emission Limiting Standards (VOCs and Odor)	N	Facility is not expected to be a source of VOC and odors
Rule 62-296.401-470, F.A.C. - Stationary Source Emission Standards	N	There is no applicable source category
Rule 62-296.500, F.A.C. - Reasonably Available Control Technology (VOC)	N	Polk County is not an air quality maintenance area for ozone
Rule 62-296.700, F.A.C. - Reasonably Available Control Technology (PM)	N	The facility is a new source, therefore not subject to PM RACT rule
Rule 62-204.800, F.A.C. - Standards of Performance for New Stationary Sources (NSPS)	N	There is no applicable source category
Rule 62-204.800, F.A.C. National Emission Standard for Hazardous Air Pollutants (NESHAPS – 40 CFR 61)	N	There is no applicable source category
Rule 62-204.800, F.A.C. National Emission Standard for Hazardous Air Pollutants for Source Categories a.k.a. MACT (NESHAPS –40 CFR 63)	N	There is no applicable source category
Chapter 62-213, F.A.C. - Operation Permits for Major Sources of Air Pollution	N	Facility is a synthetic non-Title V source for the pollutant PM_{10}. The emission limitations, restriction on hours of operation, the use of cyclones, and

Subject to:	Y/N	Comments
		restriction on the amount of material produced will ensure that the facility's PM_{10} emissions will be below the threshold for a Title V source.
Rule 62-297.310, F.A.C. - General Compliance Test Requirements, F.A.C.	Y	VE testing is required for EU Nos. 002 and 004

III. Summary of Emissions

Pollutant	EU No. and brief description	Potential Emissions lbs/hr.	Potential Emissions tons/year	Max. Allowable Emissions lbs/hr.	Max. Allowable Emissions tons/year
PM	002 - Big Pellet Mill	13.03	42.8	13.03	42.8
	004 - Small Pellet Mill	9.74	32.0	9.74	32.0
	Total (Worst Case)	22.77	48.1*	22.77	48.1*
VE	002 – Big Pellet Mill			5% opacity	
	004 – Small Pellet Mill			5% opacity	

* The **worst case emission scenario** is based on the following:

For EU No. 004 – Small Pellet Mill operating at the maximum tons/hr. rate of 5 tons/hr. and operating at its maximum allowable hours of 6,570 hrs/yr., then the maximum potential and allowable emissions using the Process Weight Table formula are:

$$3.59 \times \frac{5 \text{ tons}}{\text{hr.}}^{0.62} = \frac{9.74 \text{ lbs}}{\text{hr.}}$$

9.74 lbs/hr. x 6,570 hrs./yr. x 1 ton/2,000 lbs = **32.0 tons/yr.**

For EU No. 002 – Big Pellet Mill it can only process 19,710 tons, since EU No. 004 used 32,850 tons of the allowable total combined amount of 52,560 tons for both emissions units. Therefore, operating at its maximum allowable operating rate of 8 tons/hr. means in can only operate for 2,463.75 hrs./yr. of its maximum allowable operating hours of 6,570 hrs./yr. Then the maximum potential and allowable emissions using the Process Weight Table formula are:

$$3.59 \times \frac{8 \text{ tons}}{\text{hr.}}^{0.62} = \frac{13.03 \text{ lbs}}{\text{hr.}}$$

13.03 lbs/hr. x 2,463.75 hrs/yr. x 1 ton/2,000 lbs = **16.1 tons/hr.**

Worst Case Emission Scenario is 32.0 tons/yr. + 16.1 tons/yr. = 48.1 tons/yr.

IV. Conclusions

The emission limits proposed by the applicant will meet all of the requirements of Chapters 62-204 through 297, F.A.C.

The General and Specific Conditions listed in the proposed permit (attached) will assure compliance with all the applicable requirements of Chapters 62-204 through 297, F.A.C.

V. Preliminary Determination

The Department makes a preliminary determination that the proposed project will comply with all applicable state and federal air pollution regulations as conditioned by the draft permit. This determination is based on a technical review of the complete application, reasonable assurances provided by the applicant, and the conditions specified in the draft permit. Additional details of this analysis may be obtained by contacting the project engineer at the Florida Department of Environmental Protection Air Resource Management, Southwest District 13051 North Telecom Parkway, Temple Terrace, Florida 33637-7600.

Pursuant to Section 403.087, Florida Statutes and Section 62-4.070, Florida Administrative Code, the Department hereby gives notice of its intent to issue a permit to construct the aforementioned air pollution source in accordance with the draft permit and its conditions as stipulated (see attached).